

ABSTRACT OF THE INVENTION

A PMD compensator or generator includes one module for adjusting first order PMD without altering second order PMD (FOnSO module), and another module for adjusting second order PMD without altering first order PMD (SOnFO module). The modules enable separate compensation of first and second order PMD. First order PMD can be measured and compensated in a feedforward manner, while second order PMD can be compensated in a feedback manner. Both first and second order PMD can be compensated in a feedforward manner. The modules also enable separate generation of first and second order PMD, and can be used in a completely deterministic manner to achieve the desired PMD.